November 22, 2004

TO: Mike Gallagher
WA Dpt. of Ecology, PBT Program

From: Randy Ray
AEQUUS Corporation

Re: Comments for PBDE Draft CAP on behalf of Seafood Industry

PROCESS ISSUES

When the PBDE (fire retardant) debate started in the Legislature in 2004, the fishing industry thought it had no involvement. What did flame retardant have to do with fish? Nothing. Then this summer, the front page of the Seattle P-I had a headline with PBDEs in "wild Chinook" in Lake Washington. As a representative for the many of the seafood processors, I and the seafood industry became alarmed. Accusations were being made about our healthy product.

I then began to investigate the PBDE Chemical Action Plan process. I found that health experts project 90% to 93% of a persons exposure to PBDEs comes from food intake. I discovered the PBDE CAP process lacked any representation from the fishing industry or any food producers.

The first thing the PBDE CAP should say is that PBDEs do not pose a health risk to human or other organisms, One can say concerns do exist if PBDE level continue to rise, because animal tests do show an adverse impact to lab animals at high rates. But, presently no health risk has been shown of ingestion of PBDEs.

The scientific reports footnoted in the PBDE CAP say this repeatedly. None of the studies show a present danger from current PBDE levels. Few people have high PBDE levels. The CAP appears to be using scare tactics to sell a political agenda.

I agree other PBTs can cause severe harm. I agree that Europe has banned Penta and Octa PBDEs, but not Deca PBDEs. But, no health impact of an individual has been shown to be harmed from either penta, octa, or deca.

Yet during this process, the Dpt. of Ecology and the Dpt. of Health ran an ad in newspapers across the state. The ad showed a picture of a baby, the headline read: "HE HAS HIS DAD'S EYES AND HIS MOTHER'S PBDES". The ad went on to ask people to come to a meeting to talk about PBDEs. The inflammatory nature of the ad is unprecedented in my 29 years in Olympia. This was not an ad to ask people to come to a meeting, this was an ad that crossed the line. After

Ecology promised to pull the ad, we heard weeks later from others the ad was still appearing in web versions.

The process for the PBDE CAP has not been an inclusive one. Ecology and Health both knew of the link between PBDEs and food. Yet, neither agency bothered to notify the seafood or agriculture industry.

The PBDE CAP process needs to be started over.

TECHNICAL ISSUES

HUMAN EXPOSURE PATHWAYS & DIET

The Draft PBDE CAP centered on fish as the main dietary exposure pathway. I asked Ecology and Health for the scientific reports on which the health impact were based. These were provided. After careful review of each one, what was written in the Draft CAP did not match the backup papers. Staff appears to have cherry picked certain points and ignored others.

Fish in the CAP was cited as a primary source of diet exposure. Yet the paper failed to cite a Japanese study where people were tracked with different diets: high fish intake, medium fish intake, and low fish intake. All people still exhibited evidence of PBDEs. Therefore, fish are not the only dietary source of PBDEs.

The CAP did not cite that PBDEs are not only in found in fish, but in shellfish, Dungeness crab, pork, chicken, cheese, ice cream, eggs, and spinach. Surprisingly to scientists, beef has one of the lowest counts of PBDEs.

Yet, while PBDEs have been detected in all these foods, there still has been no impact on humans or other animals containing PBDEs. This message is not found anywhere in the CAP.

ENVIRONMENTAL EXPOSURE PATHWAYS

How do PBDEs get into the environment and food sources? Ecology seems to be baffled on such. To prevent exposure, Ecology is proposing to ban further production and use of PBDES. Yet, PBDEs are present in millions of pounds of existing products. In many products such as car seats, plastic dashboards, the plastic portion of consumer electronic products, PBDEs can make up 8% to 30% of the product by volume.

Ecology cites in the Draft CAP that “electronic recycling” facilities may represent a source of contamination to the surrounding environment of PBDEs.

In the next paragraph, Ecology cites that Municipal and private landfills, where shredded “auto fluff” is spread on landfills by the ton. Auto fluff is the portion of a

car that is left over after a vehicle is shredded and the metal is removed. The auto fluff would typically contain 8% to 30% PBDEs. This fluff is spread on top of every landfill on a daily basis by the tons. It is also used to create a berm between different cells in a landfill.

In the studies footnoted by Ecology for the Draft CAP, US studies, Swiss studies, Canadian studies, Japanese studies all cited air deposition of as the main source of PBDEs in the environment. While electronic recycling faculties are mentioned as a possible source of PBDEs, Ecology states landfills are said to be unknown in the possible environmental impact. In fact, Ecology says:

> …, it is possible that using auto fluff as a daily cover is the best waste management practice with regard to PBDEs.

One is mystified by an agency that is so worried by a substance that the product must be banned from future use, but dumping tons of the substance shredded into the open air, where scientific reports repeatedly say air-deposition is the main exposure pathway of fish, spinach, eggs, even contamination in pristine areas where no point source of PBDEs exist, would say that such disposal practices are “OK”.

If Ecology moves to ban PBDEs use and production, the substance should be classified as a hazardous waste and treated such. All landfills should be required to eliminate future and existing PBDEs from their facilities.

Another area being ignored by Ecology is “biosolids and sewage sludge”. PBDE testing have found PBDE is every sample of biosolids and sewage sludge. Typically, the PBDE will bind to a sediment particle. When a particle dries out, such as when biosolids and sludge is deposited on agricultural land, the PBDE loses the adhesion, falls off and becomes bioavailable for air dispersion or uptake into a plant. Here again, scientific papers Ecology cite detail such a concern, but no mention of these comments exist in the Draft CAP.

If Ecology moves to ban PBDEs use and production, the biosolids and sewage sludge should be classified as a hazardous waste and treated such. Land application and incineration of biosolids and sewage sludge should be eliminated and consideration given to cleaning up sites where land application has occurred.

As stated above, PBDEs, particularly Deca PBDEs, have not been shown to be harmful to humans or animals. Concern has been raised that if levels increase harm may result. Therefore, if Ecology and Health believe that PBDEs are so harmful the production should be banned, then one must also declare existing products a hazardous waste and not be allowed to be dumped in the environment and made bioavailable. And existing dumps sources should be cleaned up.

BREAKDOWN OF PENTA

Manufacturers of PBDEs are switching from penta and octa formulations of PBDEs to Deca PBDEs. Ecology is stating that all three should be banned. Ecology states Deca PBDEs breakdown into penta and is subsequently just as harmful. Ecology did provide several excellent papers detailing results of how Deca breakdown into Penta.

But, Ecology seemed to have cherry picked a preferred answer again. Papers citing that little breakdown of Deca to Penta in the environment takes place are not mentioned any place.

On the question of breakdown, Ecology has failed to prove its case. What more, Ecology seems to have deliberately only presented evidence in their possession that proves their case and purposely ignored evidence to the contrary.

This is not good science, nor good policy.

CONCLUSION

The Departments of Ecology and Health have appeared to have used a process that was deliberately not inclusive of all relevant parties. Each agency had information of the relevancy of the food industry to the PBDE issue and contacted no one.

Ecology has tried to slant this as a fish issue, where the evidence points such conclusions are totally erroneous.

Ecology and Health have put misleading ads in the media that were highly detrimental to the food industry, but have done nothing to correct such actions.

Ecology and Health have not given accurate health messages in the Draft PBDE CAP. This is highly unfortunate and scares away consumers from dietary foods deemed very beneficial my volumes scientific and medical studies.

Human exposure pathways have been deliberately slanted.

Environmental exposure pathways have just been ignored all together, even though footnoted studies clearly demonstrate concerns.

And, Ecology has failed to make its case on the breakdown of Deca to Penta.

The PBDE Process needs to be started over. The PBDE CAP needs to be seriously revised.

I would hope Governor Locke, the Department of Ecology, and the Department of Health would step back and do this process over. One of the serious flaws was trying to do so much in such a short time. This large issue cannot be covered in the time given.

We look forward to working with all parties on a real Chemical Action Plan that will address the concerns in a realistic manner of PBDEs.